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ABSTRACT

Within the multidisciplinary setting of the Brookline Early Education Project, the present investigation examined the relationship between observations of parents, pediatricians, psychologists and teachers. The study was designed to examine two questions: (1) Are systematically collected parent reports of their children's current development consistent with the observations of parents, pediatric providers and teachers? and (2) Is the reliance on parent reports in combination with direct assessment by pediatricians and psychologists a more powerful predicter of early school functioning than the use of any measure applied separately? Two hundred eighty-four preschool children with a mean of 5 years 1 month were evaluated on developmental and psychometric measures. Parent questionnaires focused on children's strengths and weaknesses in four developmental areas. Teachers rated mastery and social skills. When parent reports of their children's developmental skills were compared with findings of the various professionals, the rank ordering was the same. Parent reports of their children's verbal skills were more consistent with those of professionals than were their reports of motor functioning. Discussion focuses on contributions of parents towards the identification and management of their children's evolving skills and needs in the context of Public Law 94-142. (Author/RL)

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OBSERVATION AND EVALUATION OF PRESCHOOL FUNCTIONING: THE CONTRIBUTION OF PARENT REPORTS TO A MULTIDISCIPLINARY ASSESSMENT

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Abstract

Within the multidisciplinary setting of the Brookline Early Education Project, the present investigation examined the relationship between observations of parents, pediatricians, psychologists and teachers. Two hundred eighty-four preschool children with a mean age of 5 years 1 month were evaluated on developmental and psychometric measures. Parent questionnaires focused on children's strengths and weaknesses in four developmental areas. Teachers rated mastery and social skills. When parent reports of their children's developmental skills were compared with findings of the various professionals, the rank ordering was the same. Parent reports of their children's verbal skills were more consistent with those of professionals than were their reports of motor funtioning. Discussion focuses on contributions of parents towards the identification and management of their children's evolving skills and needs in the context of Public Law 94-142.

Observation and Evaluation of Preschool Functioning:
The Contribution of Parent Reports to a Multidisciplinary Assessment

Assessment of children's functional competence for educational readiness has traditionally incorporated professional evaluations based on developmental testing, as well as parent reports. These reports have frequently been informal, and parents have generally been required to remember their children's early developmental milestones. Recently, the enactment of Public Law 94-142 has provided the opportunity for a more systematized role for parents in the assessment and management of their children's educational needs. At the research level, however, the reliability of parents' reports has not yet been demonstrated. This investigation was designed to examine an evaluation process which incorporated formal parent ratings of their children's development at kindergarten entry. The focus of the study was to examine the extent of agreement between parent reports and the direction observations of psychologists, teachers and pediatric providers.

Background

Inclusion of parents within a multidisciplinary evaluation process makes it essential to develop instruments for systematically documenting these parents' observations and perceptions of their children's strengths and weaknesses in various areas of development. Traditionally, such observations have been elicited

during the parent interview, in brief questionnaires (Frankenburg, van Doorninck, Liddel & Dick, 1976), or in lengthy questionnaires which often have involved a structured interview (Alpern & Boll, 1972; Ireton & Thwing, 1976). Frequent inaccuracy of parent recall has been reported and associated with social class and parent level of education (Pyles, Stolz & McFarlane, 1935), family size (Haggard, Brekstad & Shard, 1960) and maternal as opposed to paternal recall (Robbins, 1962). When parent reports have been compared with the results of formal, developmental assessments, findings have also been inconsistent (Camp, van Doorninck, Frankenburg & Lampe, 1977; Frankenburg, et al., 1976; Knoblock, Stevens, Malone & Ellison, 1979).

In our study we incorporated a number of modifications in an attempt to address some of these difficulties. First, parents rated their children's concurrent rather than early development, to eliminate the possibility of inaccuracy of recall. Second, a novel aspect of the present investigation was the inclusion of parent ratings of their children's interests and preferences, as well as their skills. Finally, parents were asked to rate their children's strengths as well as their weaknesses.

Our study was designed to examine two questions:

(1.) Are systematically collected parent reports of their children's current development consistent with the observations of psychologists, pediatric providers and teachers?

(2.) Given the contribution of background variables (education level of parents, birth order) and using a cost-effective model, is the reliance on parent reports in combination with direct assessment by pediatricians and psychologists a more powerful predicter of early school functioning than the use of any measure applied separately?

Subjects

Two hundred eighty-four children, with a mean age of 5 years 1 month were tested. Sixty-two per cent were first-born. Sixty-one per cent were from families whose fathers held college degrees. (Bachelor's and above). Mothers held college degrees in 51% of the families. The ethnic distribution of the sample included white, black and Hispanic children.

Method

The study comprised one part of the Brookline Early Education Project (BEEP), a multidisciplinary, longitudinal, diagnostic and educational program (Pierson, 1977). Testing was carried out in the summers of 1978 and 1979, prior to the children's entry into kindergarten. Parents were asked to complete the "Skills and Interests Checklist" (Levine, 1980), which comprised 34 items designed to document parents' perceptions of their children's de-

velopmental skills and interests at kindergarten entry. Items assessed performance in a variety of areas, such as "balancing, cutting with a scissors, using knife and fork, remembering familiar phrases, understanding time relationships, doing simple puzzles, pronouncing words." (See Table 1.) Scores ranged from above-average (score 3) to below-average (score 1). Cognitive development was assessed by psychologists, using the McCarthy

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Insert Table 1 about here

Scales of Children's Abilities (MSCA).

Pediatric providers administered the Pediatric Examination of Educational Readiness (PEER). This is an integrated health and neurodevelopmental instrument which generates a profile of strengths and weaknesses for describing a child's function (Levine et al., 1980). Consistent with the scoring system developed, concerns or areas of weakness were documented across these broad functional areas, including spatial-body awareness, gross motor function, fine motor function, visual processing, language, basic information, sequential organization and short-term memory.

In the spring, all children were rated by their kindergarten teachers on the Kindergarten Performance Profile (KPP), a criterion-referenced performance scale developed at the Brookline Early

Education Project (Swartz & Walker, 1981). Composite ratings of spring mastery were obtained as an index of skills necessary for successful functioning at kindergarten. Finally, two years later, when these children entered second grade, the California Achievement Test was administered to that subgroup which had entered second grade.

Results

In order to assess item clusters for the Skills and Interests Checklist, factor analysis was applied. Four major item groupings were extracted: language and memory, academic inclinations, visual-perceptual-motor skills and gross motor competence (see Figure 1.)

Insert Figure 1 about here

Parent reports were first compared with those of psychologists. As is evident from Figure 2a, there was consistency in the rat-

Insert Figure 2a about here

ings of parents and psychologists. In other words, the group of children judged by parents to have "low" or less well-developed skills obtained significantly lower cognitive scores on the McCarthy Scales than did the groups judged as having "average" or "high"

skills by parents. The McCarthy scores of the "low" group averaged at 97; the middle group obtained a mean of 108, and the "high" group a mean score of 114. These differences were statistically significant. Similar findings were obtained when parents' reports were compared with the concern areas identified by pediatric providers (Figure 2b). The children whose parents rated their

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Insert Figure 2b about here

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skills and interests as "low" obtained significantly more concerns on the PEER (1.7) than those rated by parents as average or high. Finally, as is evident from Figure 2c, parent reports were similarly consistent with those of teachers.

Insert Figure 2c about here

To further examine the extent of agreement between parents and professionals in terms of their reports of a child's functioning in specific areas of development, a multiple correlation was applied. As is evident from inspection of Table 2, higher correlations were obtained in certain specific areas. Parents and psychologists were most consistent in their judgements of language and

Insert Table 2 about here

memory skills. Parents and pediatricians agreed most in their observation of a child's "academic interests" or readiness. There was less significant consistency with regard to visual-perceptual and motor skills and gross motor competence.

Finally, the separate and combined contributions of the different groups was assessed in relation to kindergarten and second grade performance, using multiple hierarchical regression analysis. Table 3 indicates that, with regard to kindergarten mastery skills, the highest simple correlations were obtained with mother's education and pediatric findings. Using an additive model, the combined

Insert Table 3 about here

contributions of mother's education, birth order, parent reports, and pediatric findings explained a significant proportion of the correlation with kindergarten function. The McCarthy cognitive index did not add further to the prediction of kindergarten mastery. Overall, the combination of different measures predicted considerably more early school function than any of the separate variables.

However, in predicting second grade achievement, the contribution of the McCarthy assumed much greater importance. Once again,

the combined assessments were explaining more school performance than the separate assessments. These correlation values were still low, a finding consistent with most early education research and possibly reflecting correlation rather than additive effects.

Discussion

The implications of the present study are varied. First, these findings support the current emphasis resulting from PL 94-142 on parent participation in the decision-making procedure for determining programmatic and intervention strategies for children with specialized educational needs (Magliocca & Stephens, 1980). Most important, these results indicate that parents should more frequently be relied on to observe and report their child's current development rather than to base their reports only on their recall of early developmental milestones, conclusions which are consistent with those of Ireton and Thwing (1980).

It may be expeditious to consider the use of parent inventories as prescreening devices for detecting subtle, low-severity, high-prevalence problems such as learning disabilities, attention deficits and associated behavioral dysfunctions. In a second phase of the screening, those children who are identified by their parents as showing specific areas of deficit could be more thoroughly evaluated.

New models for the development of child identification systems

might possibly attach greater weight to parent observation and identification of children's interests and strengths, in addition to their weaknesses. Inclusion of such parent reports may be helpful for designing appropriate intervention programs, particularly when these are interrelated with specific instructional goals.

Conclusions from the present investigation are tempered by a variety of limitations which are applicable to much research in early childhood education. It is important to take into account the multiple variables contributing to school success at this early age. In particular, varying rates of maturation, social and cultural factors, family influences, quality and appropriateness of kindergarten experience and variability of teacher perceptions may constitute important determinants of outcome. The high educational level of the present population clearly differentiates the group studied. Further analyses are underway to assess the effects of intervention programs in relation to accuracy of parent reports. The checklist used in the present study was specifically designed to be short and to incorporate parent reports of their children's strengths and weaknesses in a limited number of areas. Inclusion of other areas of development and behavior in such a questionnaire are important for further investigation.

In conclusion,as expanded models of preschool and school health care are developed, collaborative efforts and multidisciplinary approaches have great importance for identifying the evolving skills

and needs of children. Hopefully, such investigations will demonstrate many more zones of commonality amongst these observers, in conjunction with their unique contribution.

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Table 1

Instructions and Sample Items from the "Skills and Interests" Parent Checklist

In this section, there is a list of skills and interests. Please put a circle to the right of each of these skills in the column that best describes how well your child performs that skill. Each of the boxes in the left hand column are for skills that are not done well. The next column is for skills that are performed adequately for the child's age. The second to last column describes skills that are advanced or very good for the child's age. The second to last column describes skills that are advanced or very good for the child's age. The right hand column is there if you cannot say how your child is doing in these skills. In considering each of these skills, it is useful to compare the child to other children of his or her own age.

SKILLS AND INTERESTS ITEMS	1	2	3	9
Balancing	Falls easily	Seldom loses balance	Has excellent balance	Cannot say
Cutting with a scissors	Poor or unable	Average for age	Excellent	Cannot say
Using a knife and fork while eating	Awkward or unable	Average for age	Excellent	Cannot say
Remembering familiar places	Often forgets	Usually remembers	Remembers very well	Cannot say
Understanding time-relationships (before, after, etc.)	Often confused	Occasionally	Never confused	Cannot say
Does simple puzzles	Has difficulty	adequately	Does very well	Cannot say

Note: The checklist consisted of 34 similar items.

Table 2

Associations Between Reports of Parents, Pediatric Providers, and Psychologists

		PARENT REPORTS			
		Language and Memory	Academic Inclinations	Visual-Perceptual-Motor Skills	Gross Motor Competence
PROFESSIONALS	Overall PEER Concerns	.18**	.36***	.08	.13
	McCarthy General Cognitive Index	.50***	.32***	.17**	.31***

*p<.05

**p<.01

***p<.001

Table 3

Analysis of the Separate and Combined Contributions of the Observations of Parents, Pediatricians, and Psychologists, in Relation to Achievement at Kindergarten and Second Grade

VARIABLE	KINDERGARTEN MASTERY SKILLS		SECOND GRADE ACHIEVEMENT	
	Simple Correlation (r)	Multiple Correlation (R)	Simple Correlation (r)	Multiple Correlation (R)
Mother's Education	.29	.29	.25	.25
Birth Order	.13	.30	.22	.30
Parent Ratings	.05	.32	.06	.32
Pediatric Findings (PEER concerns)	.38	.48	.11	.33
McCarthy General Cognitive Index	.24	.49	.35	.43

SKILLS AND INTEREST FACTORS

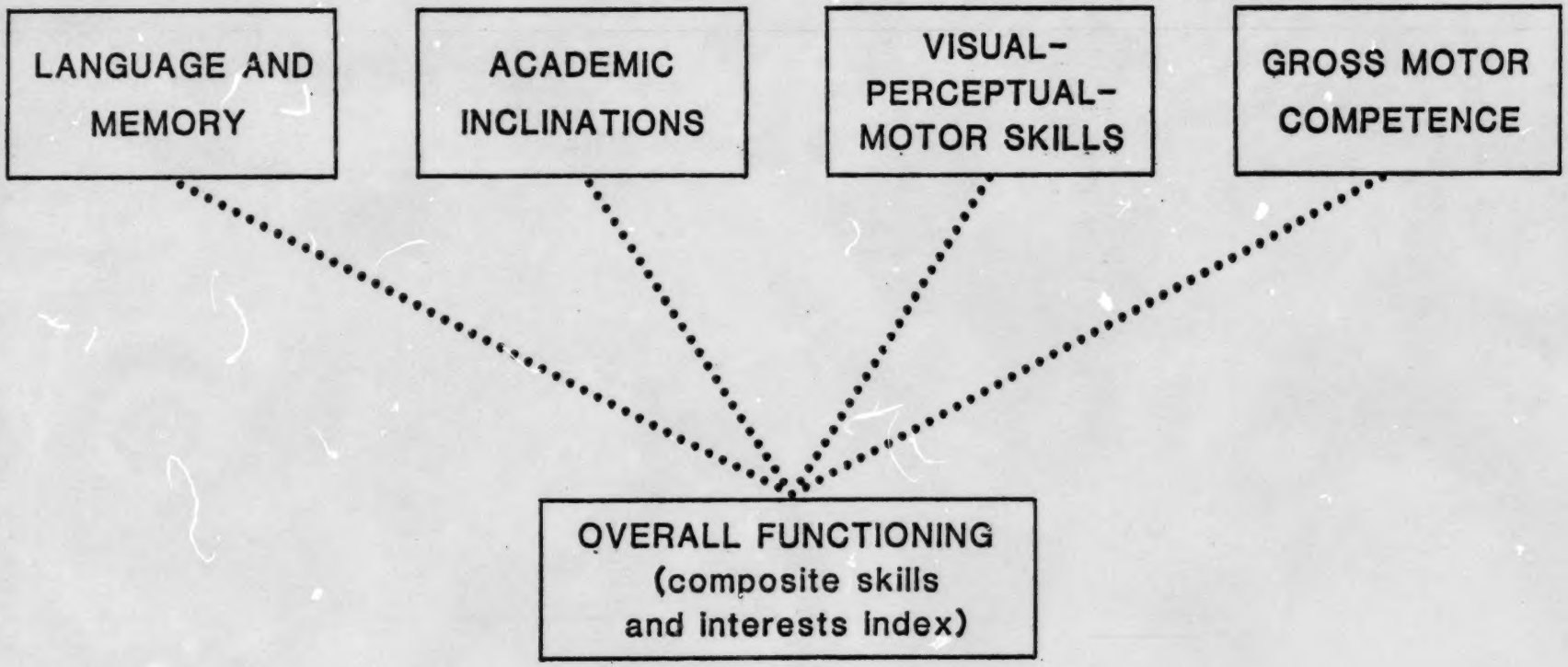

Figure 1

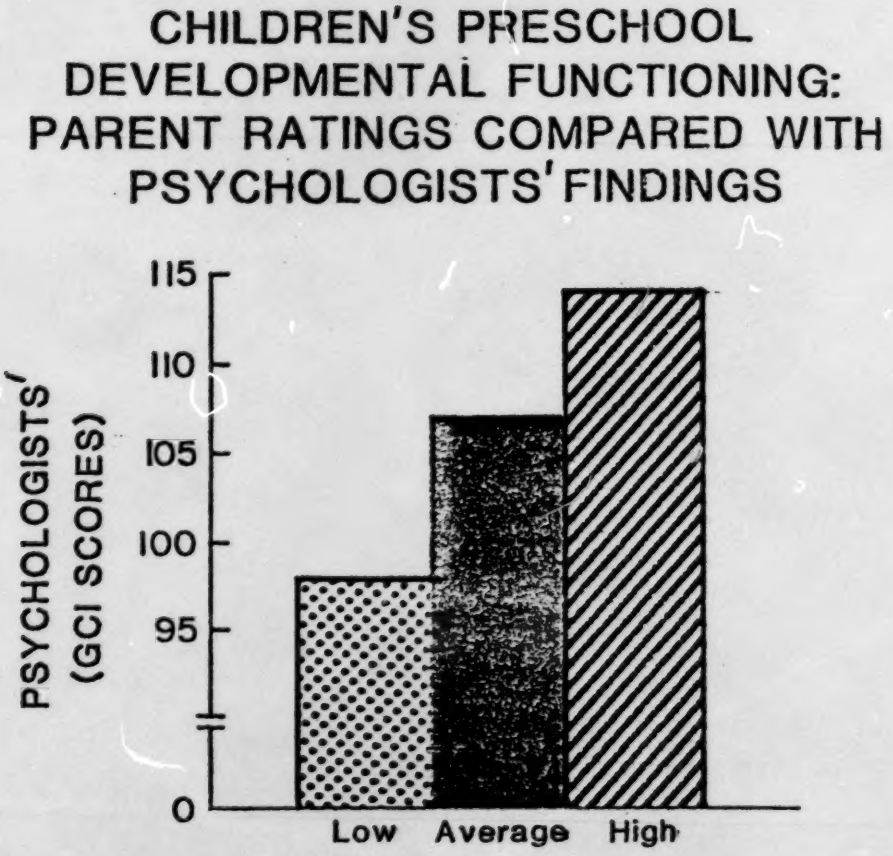

Figure 2a: SKILLS AND INTERESTS: OVERALL FUNCTIONING

PARENTS

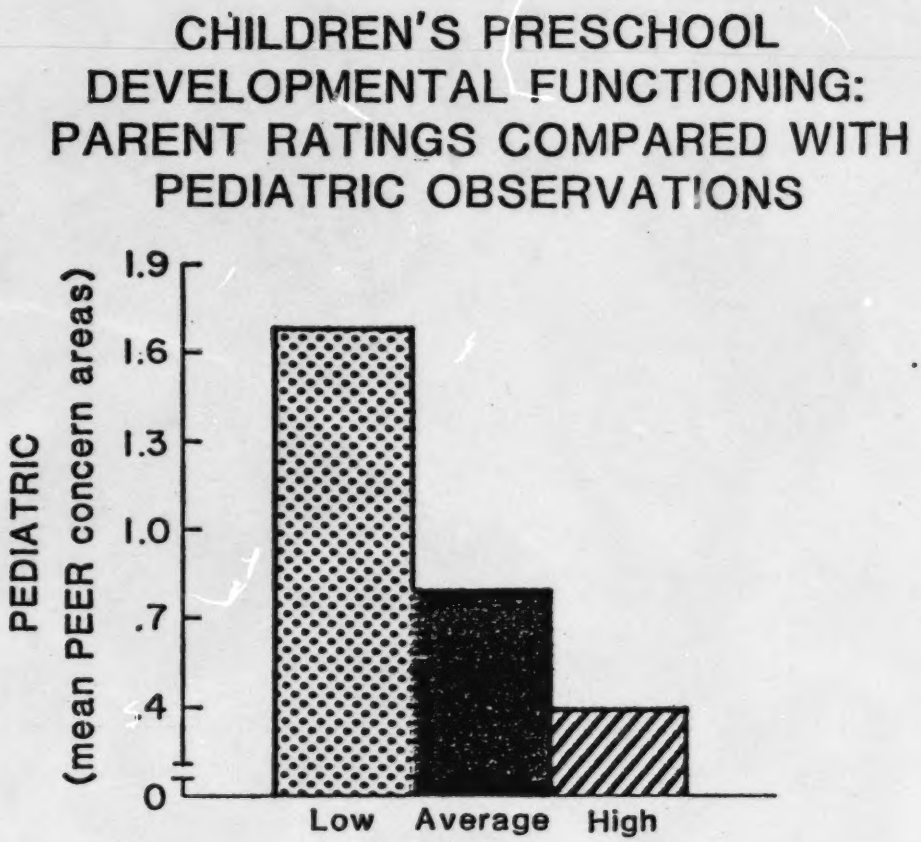

Figure 2b: SKILLS AND INTERESTS: OVERALL FUNCTIONING

PARENTS

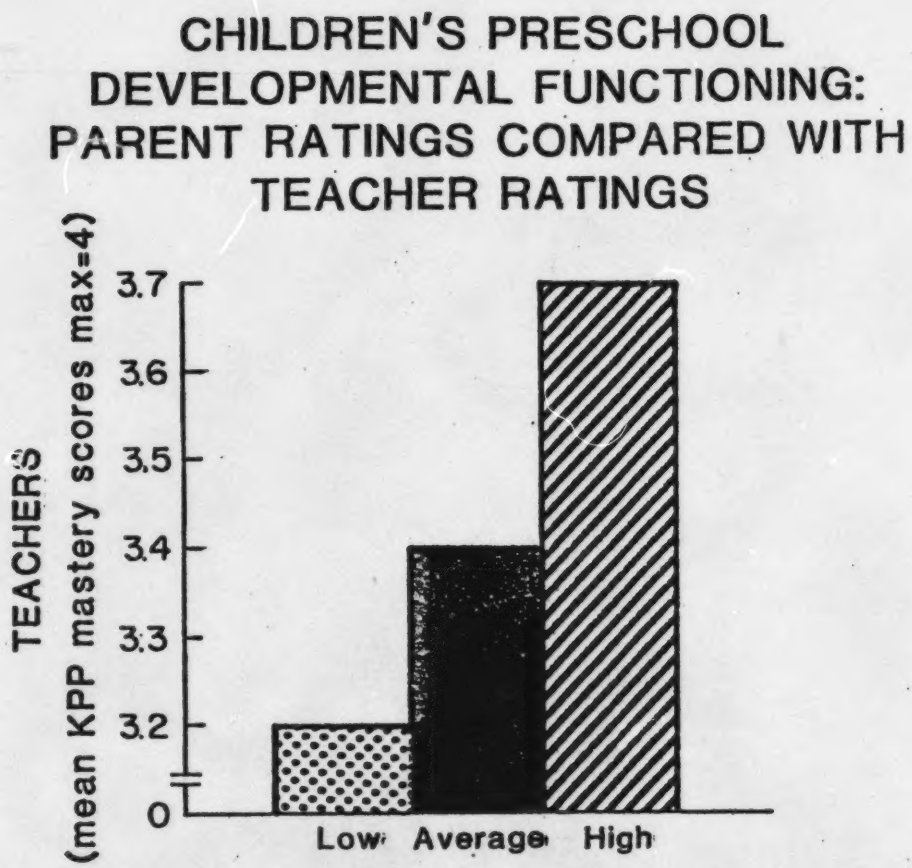

Figure 2c: SKILLS AND INTERESTS: OVERALL FUNCTIONING

PARENTS

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